

Software Tools for Building and Nurturing Virtual Learning Communities

**MU-SPIN 99
Florida**

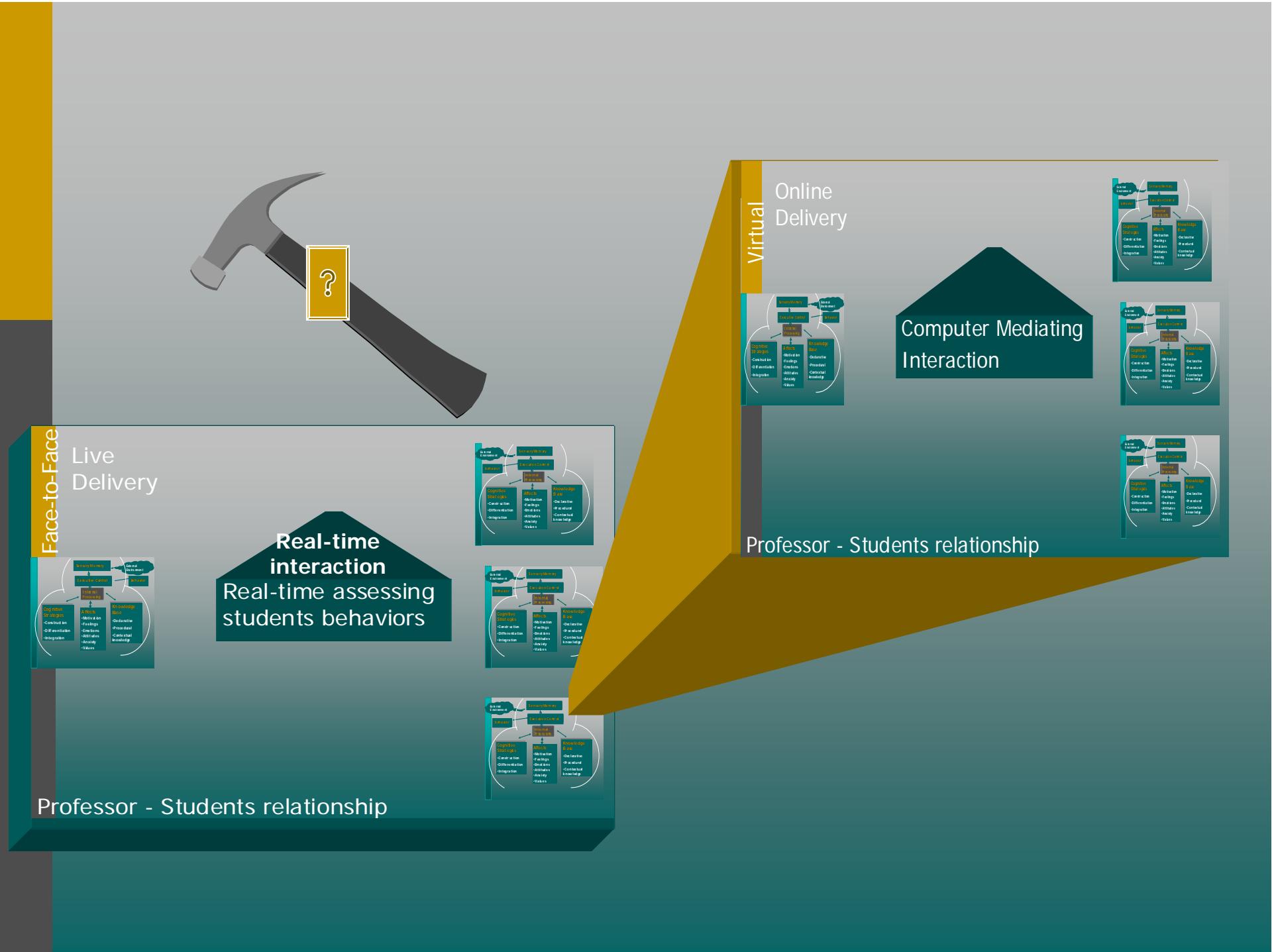
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College of Engineering and Computer Science
California State University Northridge.**

Experience

- Information Technology Pressure
 - Media (e-commerce) going virtual
 - Students eager to know the technology
 - Work place requires the technology
 - Universities going virtual

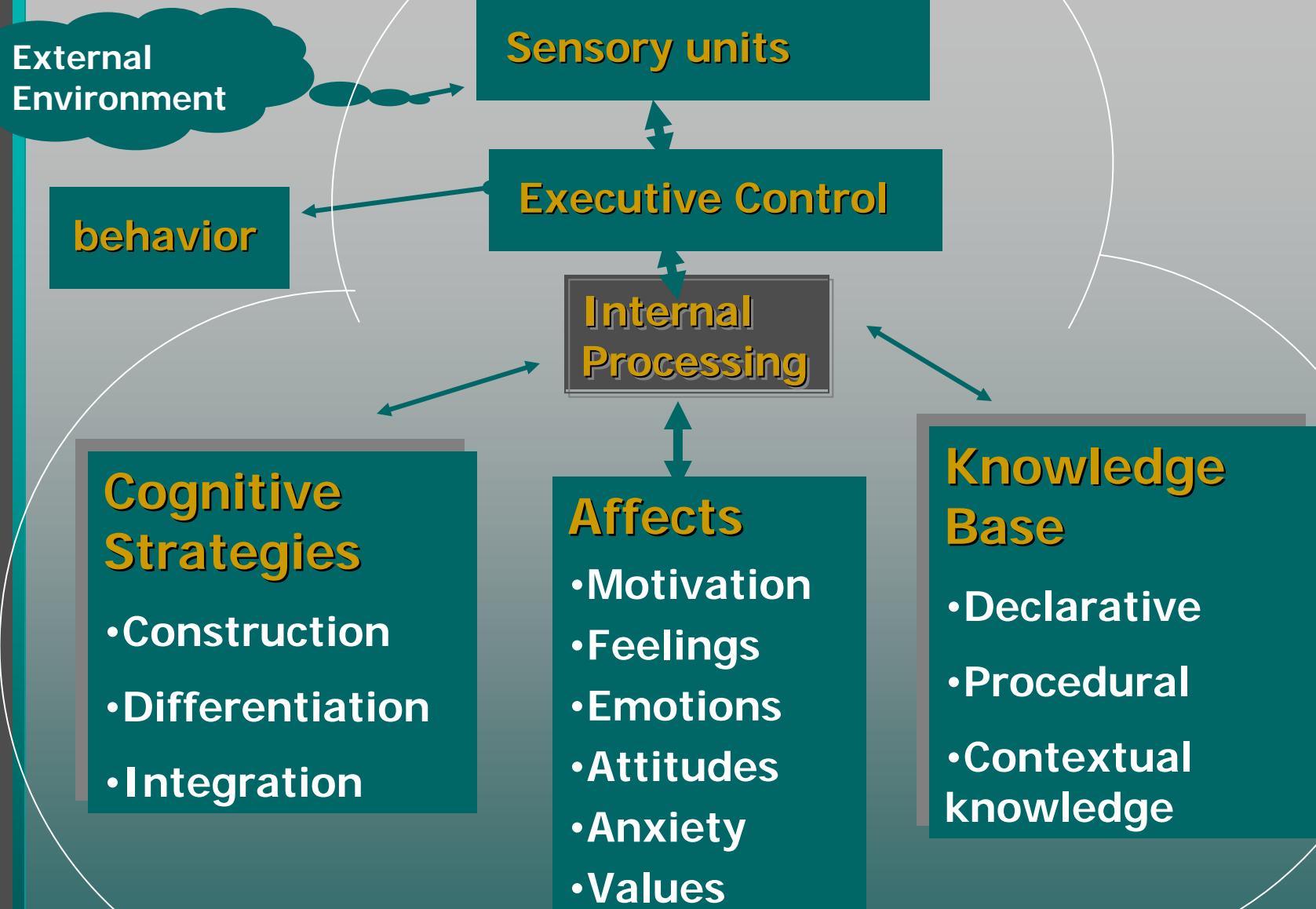
“A need for a virtual self”

www.ecs.csun.edu/~gem/MUSPIN99.ppt



Overview

- Face-to-Face Paradigm.
- Virtual Paradigm.
- Building A Virtual Learning Community.
- Nurturing A Virtual Learning Community.
- Survey Of Software Tools
- Conclusion

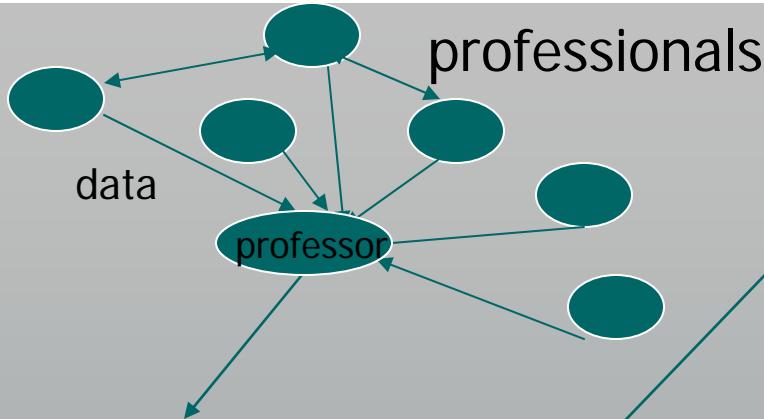


Learning Model by Tennyson (1994)

Face-to-Face

Design Course

Course Objectives
Select Topics
Collect Material
Create Material
Edit Material



information

Syllabus

Books, ...

Notes

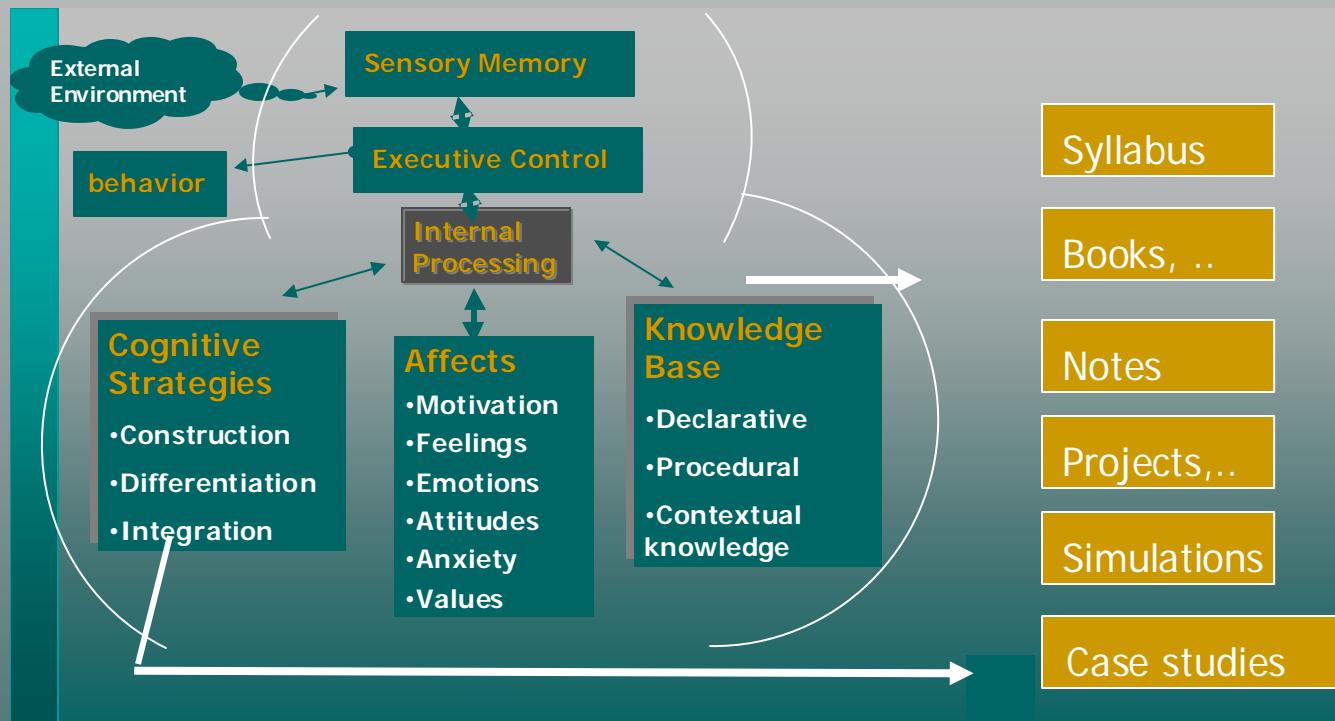
Projects,..

Simulations

Case studies

Professor to Professionals relationship

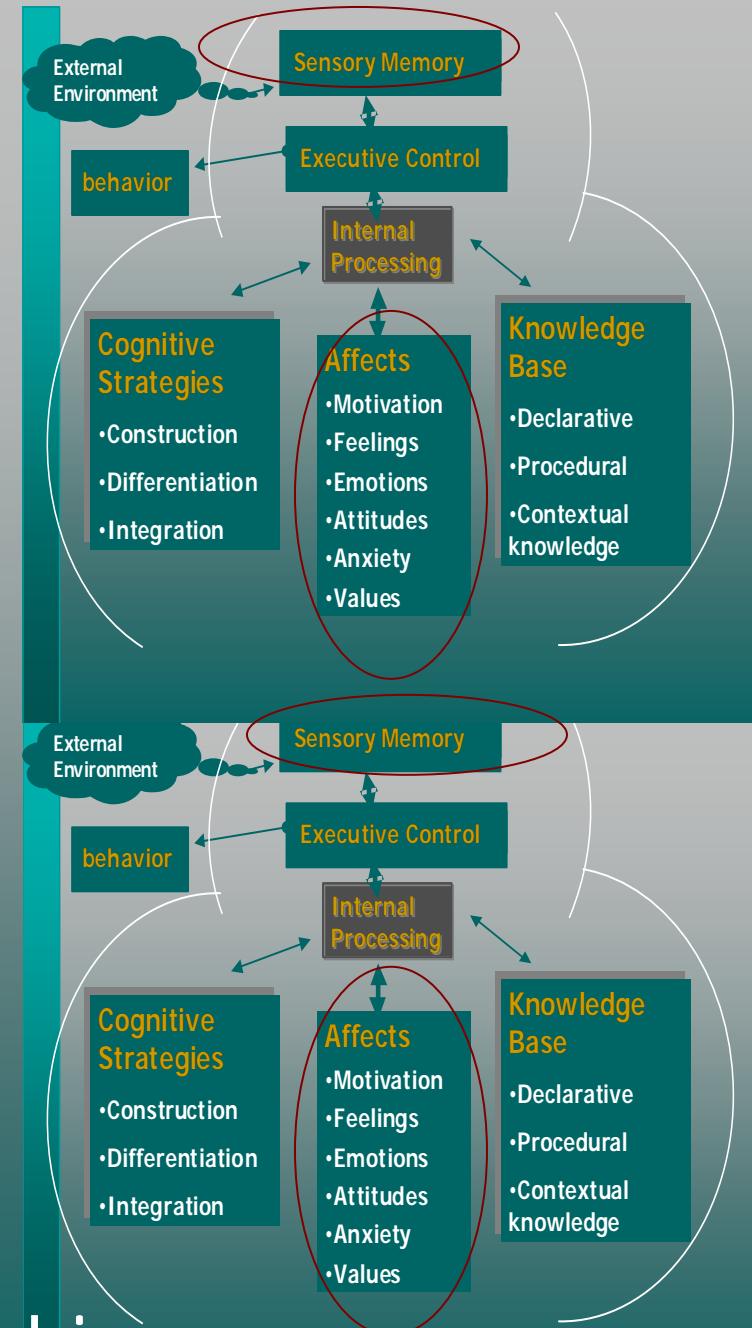
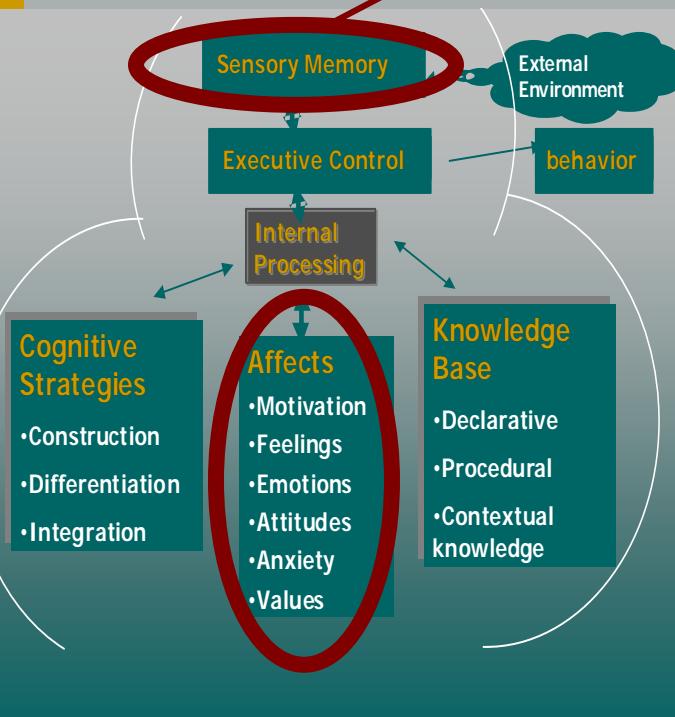
Design Course



Professor to students relationship

Face-to-Face

Live Delivery

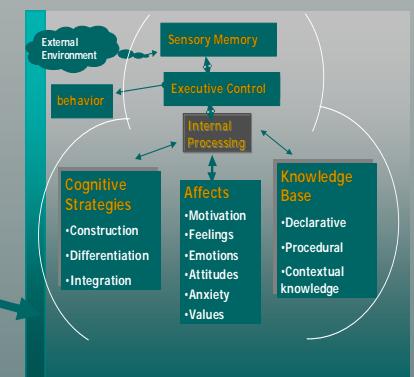
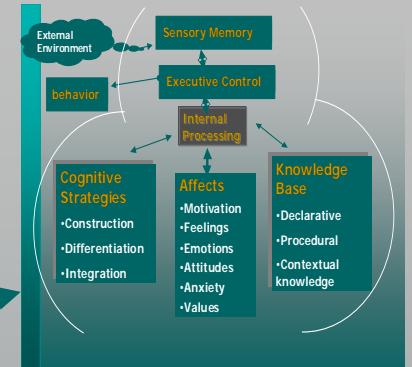
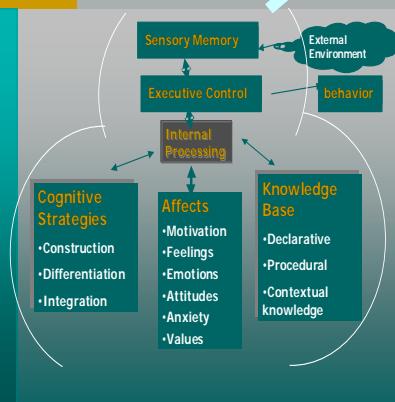


Professor to students relationship

Face-to-Face

Live
Delivery

Information



Face-to-Face

Live
Delivery

Eye contact

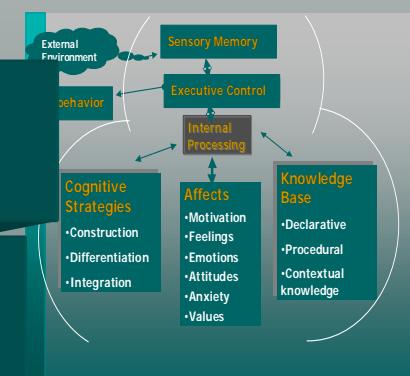
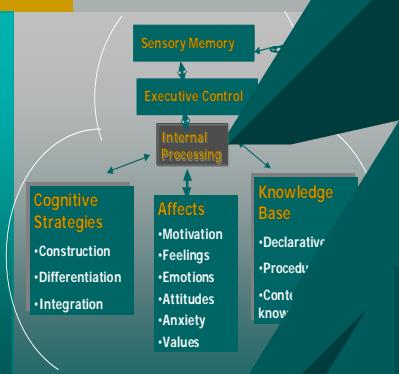
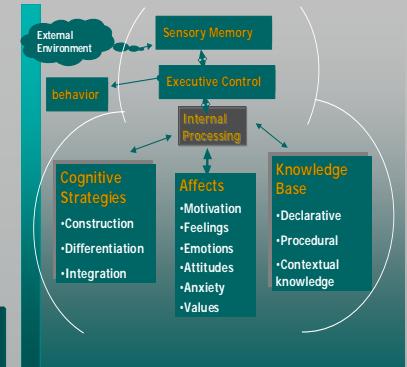
Immediate feedback of
students engagement

students understanding

students interaction

Non-verbal communication

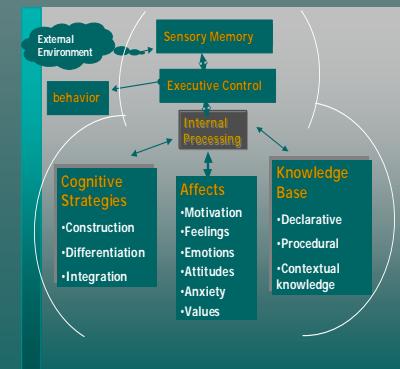
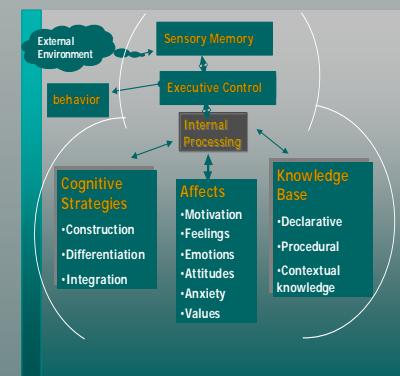
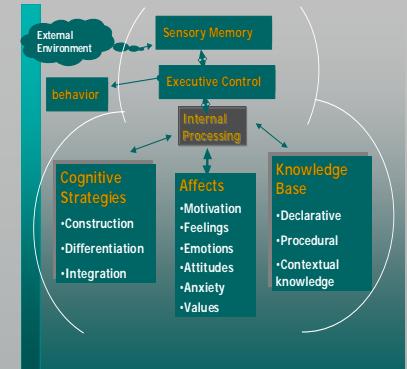
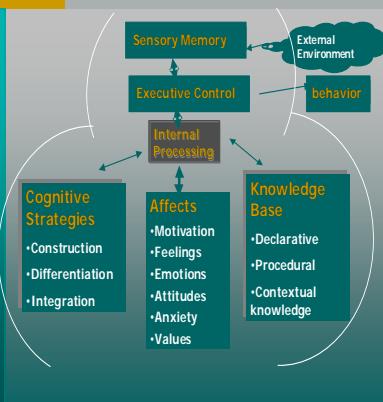
Professor to students relationship



Live Delivery

methods
content
Regulates

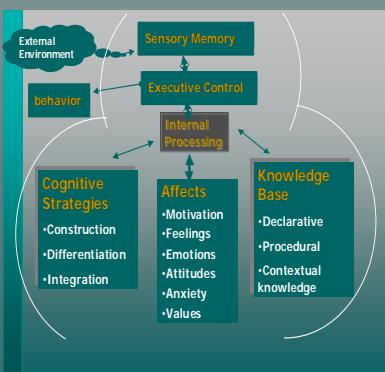
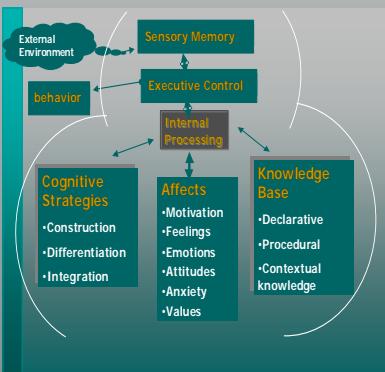
Real-time assessing
students behaviors



Professor - Students relationship

Face-to-Face

live
Delivery



Listening

Non-verbal

Live participation

Prepare for assessment

Knows the Scheme

Students knows his/her Role

Virtual

Online Delivery
Asynchronous

Listening

Non-verbal

Live participation

Prepare for assessment

Know the Scheme

Do not know the Scheme

Students **do not** know his/her Role

Online Delivery
Asynchronous

**Students need to
know their Role**

Building A Virtual Learning Community

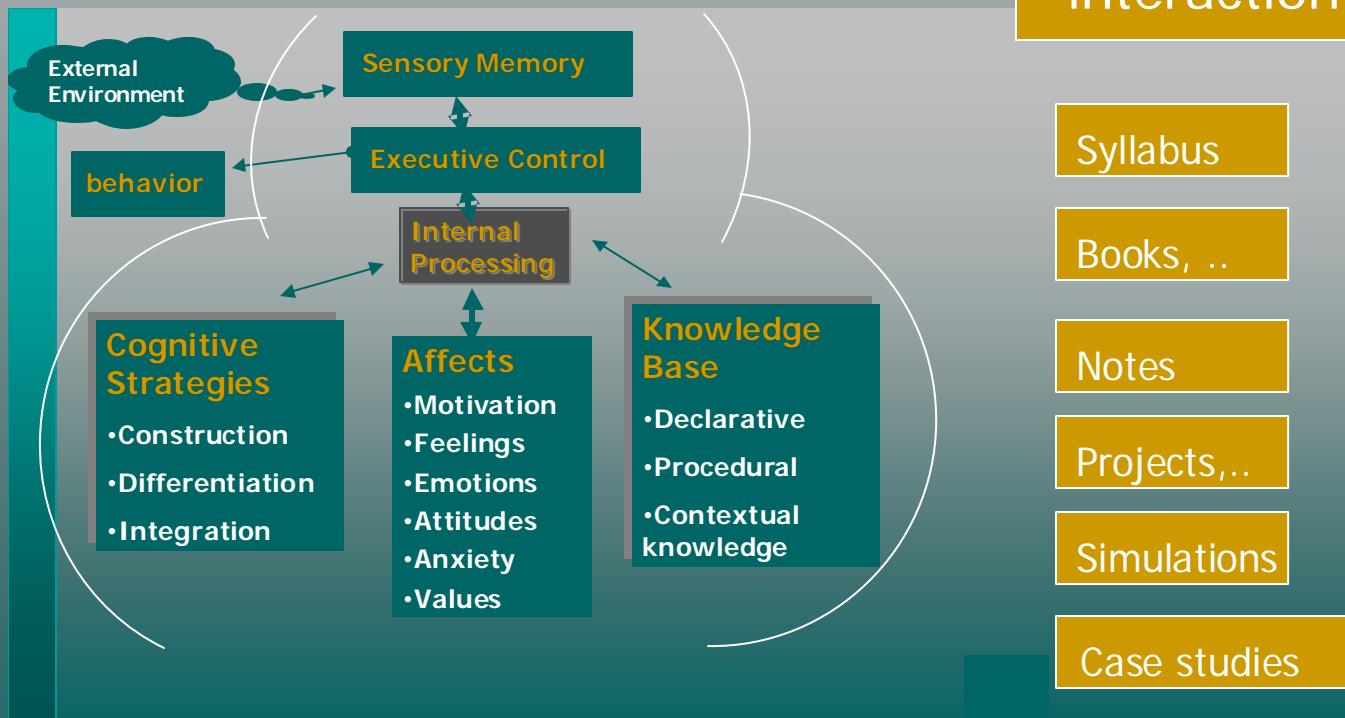
- Prepare the students for this new experience
 - Expected study habits
 - Time management skills
 - Clearly define
 - their role
 - participation (when, how, expected)

Building A Virtual Learning Community

- Prepare the students for this new experience
 - Let them know the communication protocol
 - How to participate online
 - manners to participate
 - Introduction of virtual mates
 - Sense of common experience

Analyze interaction needs

Determine when and what type of interaction



Professor to students relationship

Nurturing A Virtual Learning Community

- Continuous Interaction
 - Professor - students
 - Students - students
- Continuous Assessment
- Continuous Feedback

Nurturing A Virtual Learning Community

- Stimulate the network of virtual relationships
- regulate anxiety
- regulate the load of data
- Maintain group task
 - specific tasks and objectives

Nurturing A Virtual Learning Community

- Mechanisms to communicate group results to the community
- How to use technology to exploit online resources
- Support the transition to the new learning paradigm

Virtual

Online
Design

Design interaction

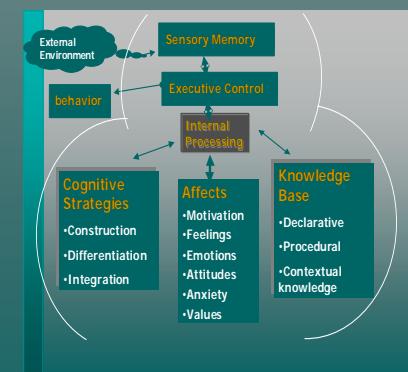
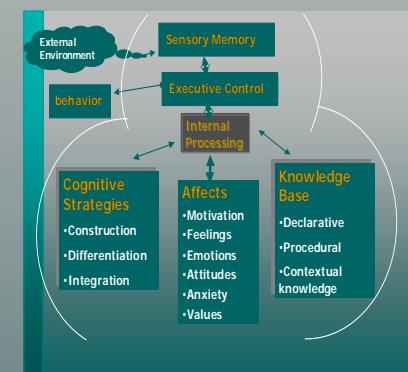
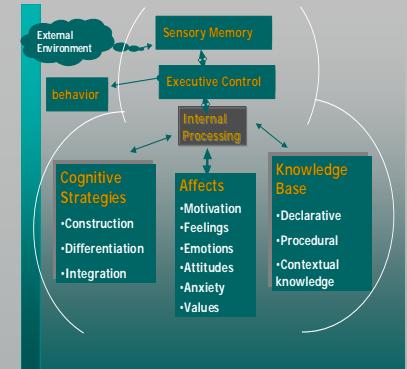
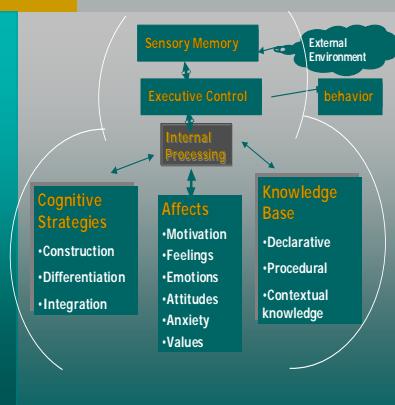
Content
presentation
resources

Computer Mediating Interaction

role
expectation
participation

Design
student support

Professor - Students relationship



Virtual

Online
Delivery

Assessing

Proactive

Feedback

Professor - Students relationship

Programmed interaction

Content
presentation
resources

**Computer Mediating
Interaction**

expectation
role
participation

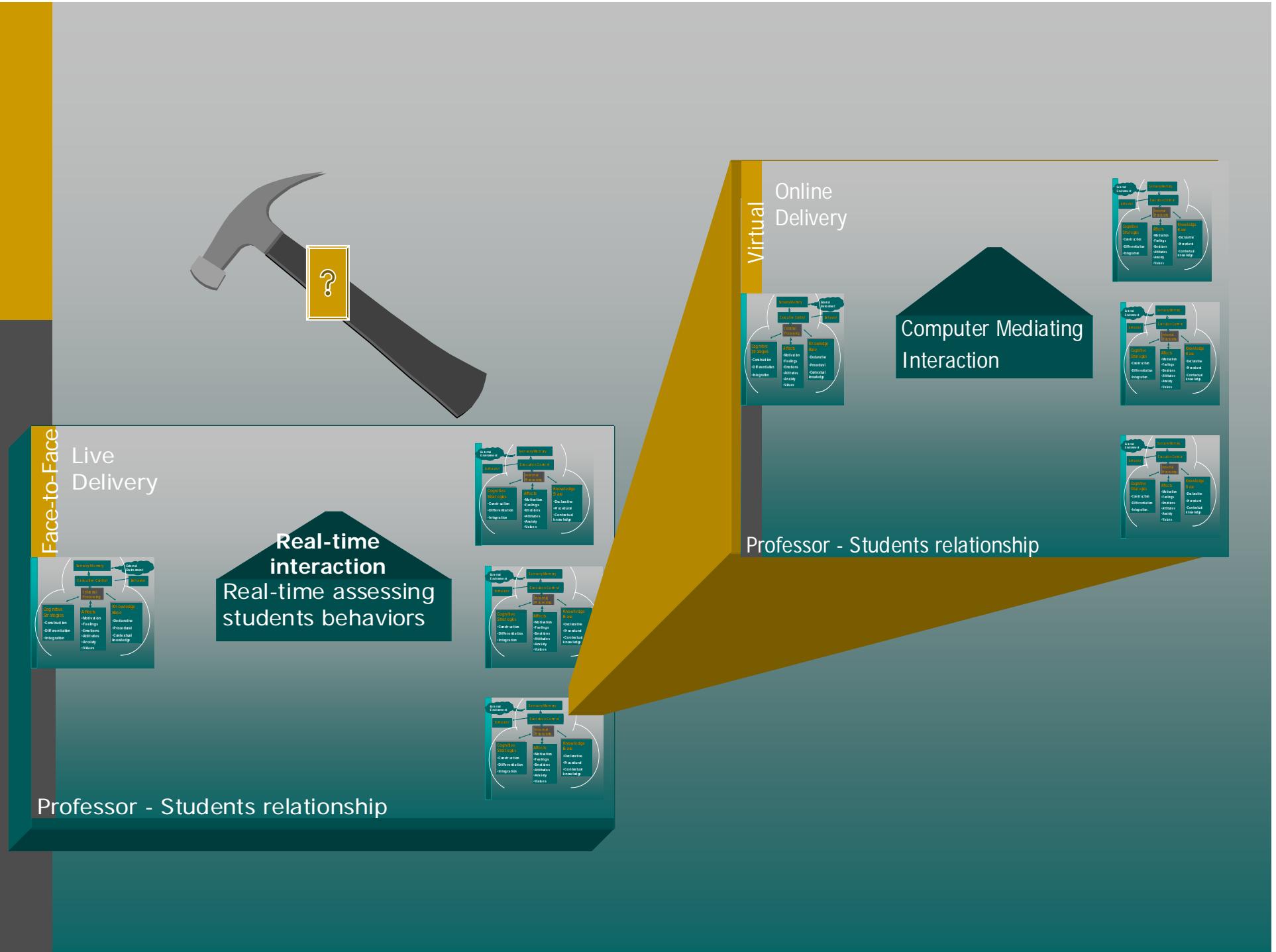
**Programmed
student support**

Flexible

Updating

Online
resources

Communicating
to one
to all



Software Tools

- WWW-based tools
 - Browsers (Html, CGI, Java,...)
 - Authoring tools (Micromedia,..)
- Support
 - Publishing documents
 - Interaction
 - Bulleting boards
 - Chats
 - News groups
 - EMail

No design tools

No management tools

No assessment tools

No group support tools

Automate
processing

Low level

Software Tools

- WWW-based tools
 - **Browsers**
(Html, CGI, Java,...)
 - **Authoring tools**
(Micromedia,..)
- Support
 - **Content, creation presentation**
 - **Interaction**
 - **Bulleting boards**
 - **Chats**
 - **News groups**
 - **Mail**

No design tools

No organizational tools

No assessment tools

No group support tools

Next level

Software Tools

- Tool Kits
 - Automatic page loading,
 - Assessment managing tools
- Support
 - publishing capabilities
 - Interaction
 - Bulleting boards
 - Chats
 - News groups
 - Mail
 - Online test engines

No design tools

limited management tools

limited group support tools

Intrakal

www.anlon.com

high level

Software Tools

- Integrate Tool
 - Close environment
 - Organizational tools - content
 - Managing tools
- Support
 - publishing capabilities
 - Interaction
 - Bulleting boards
 - Chats
 - News groups
 - Mail
 - Online test engines
 - tracking, monitoring student's activities
 - sharing documents, annotations, security

WebCT, Symposium,
Cyberclass

limited design tools

limited group support tools

Software Tools

- Commercial Focus
 - Lotus Notes
 - Microsoft Exchange
 - Oracle
 - Collabra Share
 - Group interaction

Software Tools

- Design
 - Content structure and interaction
 - student support to easy transition to new paradigm
 - stimulation of the virtual network
 - knowledge base with easy access and retrieval

Software Tools

- Design group tasks
 - Agents that facilitate design and layout of group task
 - Online agents that spread results to the community as well as link the results to relevant info in the knowledge base

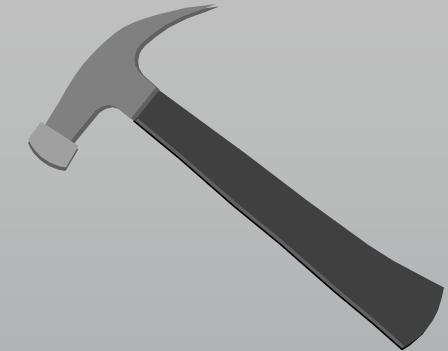
Software Tools

- Online agents that
 - make possible meetings, brainstorms, and summaries
 - facilitate online resources to groups
 - monitors students involvement in the task

Software Tools

- Online agents that monitor learner progress and offers timely feedback and/or proper advice for improving performance
- Online database of resources, fast preview, resource's strength, weakness, hardware requirement....

Conclusion



- Current software tools
 - Non integrated Tools
 - **Browser - No automated processes**
 - Programming
 - Integrated Tools - Commercial
 - Costly to students
 - Need more research..

Conclusion

- Start by introducing electronic communication in the traditional setting.
- Keep updating your technological skills
- Fast growing innovation in technology will bring better tools.
- Do not focus in the technology, this is the medium and not the end.

Design and **collaboration**

Software Tools Sites

- Intrakal : **www.anlon.com**
- WebCt : **www.webct.com**
- Virtual - U : **http://virtual-u.cs.sfu.ca/**
- Web Course in a Box : **http://cti.itc.Virginia.edu/cgi/local/pmgipm/class/tkdoc/displaydocs**
- World Wide Web courseware developers Listserv Web site - **http://www.unb.ca/web/wwwdev**